



INSTRUCT-O-GRAM

THE HANDS-ON TRAINING GUIDE FOR THE FIRE INSTRUCTOR

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FORCIBLE ENTRY

TIME REQUIRED

Three hours

INSTRUCTIONAL AIDS

Acquired structure or forcible entry props
Various hand and power tools

MOTIVATION

Forcible entry is an integral evolution to many firefighting tactics. It is essential that a firefighter have a basic understanding of forcible entry tools and techniques.

OBJECTIVES

The student will:

1. Demonstrate a basic understanding of forcible entry tools and techniques by applying the material in a practical setting.
2. Describe the general categories of tools used in forcible entry.
3. Demonstrate the hoisting of selected hand tools using generally accepted knots and practices.
4. Describe the techniques to force entry through various wood and metal doors (NFPA 1001 (1997) 3-3.3).

5. Describe the techniques to force entry through various windows (NFPA 1001 (1997) 3-3.3).
6. Demonstrate the proper use of various hand and power tools to force entry through various doors and windows (NFPA 1001 (1997) 3-3.3).

OVERVIEW

TOOLS

Demonstrate hoisting tools

Describe entry through doors

Describe entry through windows

Demonstrate entry through doors and windows

I. TOOLS

A. Forcible Entry Implies Speed

1. Forcible entry operations should be carried out as quickly as possible.
2. Forcible entry should create as little damage as possible.
3. Both speed and minimal damage are achieved through proficiency with tools.
4. Personal safety must be emphasized.

B. Cutting Tools

1. Tools most often used are axes, bolt cutters, power saws, pneumatic cutters, and hydraulic cutters.
2. The chisel end of a halogen tool or kelly bar can be used for cutting.

C. Prying and Forcing Tools

1. Halogen tool, claw tool, kelly tool, pry axe, and hux bar are all examples of prying tools with similar uses.
2. Flathead axes are often used for prying.
3. For heavy work, a maul or hammer-head pick can be used.
4. Hydraulic and pneumatic tools are available in various sizes and types.
5. Power tools should be used where heavy or barred doors are common.
6. Battering rams are effective for breaking through heavy doors and walls.

D. Lock Pullers

1. Designed to remove cylinder locks.
2. Drive into locked cylinder and then pull with halogen or similar tool.

II. DEMONSTRATE HOISTING TOOLS

- A. Review the basic knots covered in Fire-fighter I, i.e., bowline, clove hitch, figure eight on a bight, and figure eight reweave.
- B. Review the use of basic knots to tie an axe, pike pole, halogen bar, ground ladder, and smoke ejector for hoisting using a portion of the hoisting rope as a tag line.
- C. Have students demonstrate the use of knots by hoisting selected tools and equipment from a height of at least 20 feet.

III. DESCRIBE ENTRY THROUGH DOORS**A. Commercial Occupancies: Front**

1. It is almost always easier to force entry through the front door as opposed to the rear door.

- a. In older buildings, front doors might be constructed of wood or wood frame with ordinary glass.
- b. In modern structures, front doors are primarily made of tempered glass or heavy plate glass in a strong frame.
- c. Rear doors are usually made of steel or reinforced with steel.
- d. Front doors protected by metal shutters are typically accordion-type barred grating or similar devices.

2. Tempered-Glass Doors

- a. For all practical purposes tempered glass cannot be broken.
- b. Attack at the lock or find some other means of entry.
- c. Locks usually cylinder types are located at the middle, bottom or both of the doors.
- d. Double tempered door locks are usually located in the middle.
- e. Use a lock puller to remove the lock.
- f. If a lock puller is not available, drive the chisel end of a pry bar between the lock and frame or between two sections to force open.
- g. An alternative method is to drive the pry bar into the space above the lock and then force it downward to destroy the locking pins.
- h. For bottom locks, drive a tool under door to displace the keeper.
- i. Hydraulic tools can be used to force apart double doors or raise the lock at the bottom.
- j. The quickest way may be to force the plate glass window near the tempered glass door.
- k. If a tempered glass door must be broken, strike at lower corner of door with the pick end of an axe.

3. Heavy Plate-Glass Doors

- a. Treat the same as tempered-glass doors.
- b. Usually have a bar across the center or lower center of the door.
- c. Better to remove/force the lock or enter through a nearby plate glass window.

4. Wooden Doors

- a. May or may not have cylinder locks.
- b. Usually have bolts that engage keepers at the top and/or the bottom of the door, or both.
- c. Double doors can be bolted to each other; pulling or forcing the lock does not guarantee entry.
- d. May have center panels, which can be broken out for entry or opening the door.

B. Commercial Occupancies: Rear

1. Steel Doors

- a. Before attempting to force, check for exposed locks or hinges.
- b. If the lock can be seen, drive a pry tool between the door and frame and force open.
- c. If hinges are exposed, pull hinge pins or drive the tool between the hinge and door facing.
- d. Doors with neither lock nor hinges exposed cannot be forced with standard tools.
- e. Doors may be secured with a steel bar or fox lock.
- f. Doors that cannot be forced can be cut open with a power saw.
- g. Heavy steel doors can be opened with a battering ram.
- h. Doors with fox lock are practically impossible to force - look for alternative entry point.
- i. If a door with a fox lock must be

forced, the use of an explosive charge may be necessary.

2. Breaching Walls

- a. Sometimes it may be quicker to open wall rather than force a steel door, especially concrete block or cinder block walls.
- b. Use mauls, battering rams, and hammerhead picks to make openings.
- c. Block walls can be cut with power saws.
- d. If possible, open a wall near the doorway.
- e. At first, make the opening only large enough to permit a stream to be directed inside.
- f. Make sure blocks or bricks over openings are firmly in place.

3. Roll-Up Doors

- a. Doors opening upward might be locked in several ways.
- b. Some, usually wood, are locked with a modified fox lock - open by knocking out panel and reaching in to rotate handle.
- c. Wooden doors might be secured with pins from the sides of the door to the track - door should be pried at the bottom.
- d. Rings on the doors may be padlocked to a ring set into the floor - force with a tool under the door against the ring.
- e. Wooden doors can be cut with a power saw or axe.
- f. Metal doors do not usually have built-in locks - can be padlocked to floor or locked into their rails.
- g. Manually operated doors are often locked through the raising chain.
- h. Motorized doors are rigidly connected to an operating mechanism.

- i. First step in forcing metal doors, is to pry it up at both sides.
- j. Force doors that are locked through the raising chain or pins by prying.
- k. If a door must be opened cut a hole in the door with a power saw.

4. Light Doors

- a. In many older buildings, rear doors may be made of wood or light metal, reinforced with bars or fitted with several locks.
- b. Main lock should be forced first.
- c. Additional bolts or locks can usually be forced with hand tools.
- d. If the door has a glass pane without bars, it's best to remove the glass and attempt to open the lock from inside.

C. Dwellings and Apartments

1. Locked residential structures are more easily entered than commercial structures.
 - a. Front and rear doors are usually the same type and of light construction.
 - b. Often have one or more glass panes.
 - c. Multiple-unit street doors at front are often unlocked.
 - d. Lobby doors may be secured by electric lock.
2. Apartment Doors
 - a. Might have to open individual doors.
 - b. In older buildings, doors made of wood - cylinder locks may have been added.
 - c. Frames of doors are usually strong enough to support pry tool.

- d. In modern buildings, doors are made of steel or wood covered with steel - secured with cylinder locks and possibly one or more bolt-type locks.
- e. In some cases, hydraulic type smoke ejector hangers can be used to force the door.
- f. If the doorframe is constructed of light metal, it may not support the pry tool.

3. Balcony Doors

- a. Sliding glass with cylinder locks or some bolting arrangement holding at top and bottom.
- b. Bolts should be forced with available tools.
- c. If the door is particularly tough to force, drive a pry tool between the door and framing.
- d. Driving pry tool between the doors can also open two doors locked to each other.
- e. Avoid straining glass enough to break it.
- f. Break glass for entry only for immediate rescue or when the glass is already stained or damaged by heat/smoke.
- g. When a bar or rod holds a sliding section, the glass will have to be broken.

D. Office Buildings

1. Typically present the same problems as apartments.
2. Age of building determines type of inside office door, unless remodeled extensively.
3. Most buildings are open to the street during the day.
4. Outside entrances usually similar to those found in stores of the same general age.

E. Other Occupancies

1. Warehouses and Factories
 - a. Usually have roll-up doors at the loading platforms and heavy wooden or steel pedestrian doors.
 - b. Windows on lower floors may be barred.
 - c. Usually surrounded by chain-link fences - may require forcing a padlock.
 - d. Some occupancies are protected at night by guard dogs.
2. Combination occupancies - may present double entry problem requiring members to force first into building and then into the individual units.

IV. DESCRIBE ENTRY THROUGH WINDOWS**A. Double-Hung Windows**

1. Windows allow the simplest and quickest access to a building.
 - a. Force by prying up the bottom section near the center of the window.
 - b. If the top section is made of small panes, the pane nearest the lock can be removed and the window unlocked.
2. If it must be used for entry and cannot be forced quickly, it should be completely knocked out.
 - a. If at ground level, use the axe or other appropriate tool.
 - b. Above ground situations may not be discovered until window is reached.
 - c. Remove all splinters of glass before going through.
3. Position ladders upwind from windows.
4. When time and/or the fire does not permit the use of tool, consider using a ladder to knock out the window.

(USE EXTREME CAUTION WHEN PERFORMING THIS TECHNIQUE).

5. Glass panes may be replaced with unbreakable plastic panes.
 - a. May be cut with power saw.
 - b. If the frame is constructed with material other than steel, knock out the entire window frame.
 - c. May have to knock out panel, which can be removed by striking corner with a pickhead axe.

B. Casement Windows

1. Window hinged vertically with the moving part of window attached to crank.
 - a. Window crank usually light.
 - b. Window lock is located in the middle or bottom of the window.
2. Best way to open the window is to break out a pane of glass, reach in and unlock the window, then force it open with a pry tool.
3. If the heat is not intense, remove a second pane to operate the crank.
4. Many casement windows are too narrow to allow entry.
5. Narrow windows are often located at the sides of large glass picture windows.

C. Other Windows

1. Design of some windows prevents use for quick access.
 - a. Very heavy metal frames.
 - b. Wire within glass.
 - c. Horizontally hinged sections that swing out when window is opened.
 - d. Center swing-out sections surrounded by stationary glass.
2. Some windows are simply too small to allow entry.
3. Large double-pane windows are expensive to replace.

4. Storm windows or screens must be removed before built-in windows can be opened.

V. DEMONSTRATE ENTRY THROUGH DOORS AND WINDOWS

- A. Full protective clothing including eye protection is required for this session.

NOTE: Review the skills and techniques covered in the Fire Fighter I program. This session should be an opportunity to practice previously learned skills rather than a session where new skills are learned.

- B. It may be appropriate to review the handling, use, and operation of the tools to be used prior to any student demonstrations.
- C. Demonstrate the proper use of various hand and power tools to force entry through wood and metal doors.
- D. Demonstrate the proper use of various hand and power tools to force entry through various windows.

REVIEW

Checking for Extension and Forcible Entry Tools

Demonstrate hoisting tools

Describe entry through doors

Describe entry through windows

Demonstrate entry through doors and windows

REFERENCES

Truck Company Fireground Operations, 2nd Edition, Chapters 6 and 7

Essentials Of Fire Fighting, 4th Edition, IFSTA, Chapters 6 and 8

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